

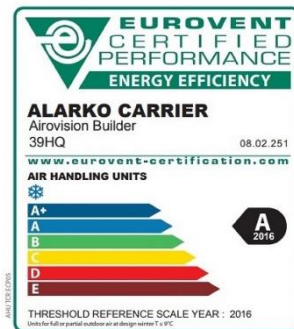
Technical Specification

Project name :	Airovision Builder version: E1.13 (12-4-2022)(R086)/A
Quotation no. : 6.1 AHU Technical Guide / 031	Eurovent identification number: 08.02.251
Eurovent identification number: 08.02.251	

GENERAL DATA

Customer reference	6.1.1 35000 15.12
Number off	1
Location	External (flat roof)
Delivery	In sections
AHU finish	Outside in standard colour (RAL 7035)
Product	Air handling unit
AHU configuration	Inline
Pallet option	Excluded
Lifting Beam	Included
Total weight (each)	kg 2096
(Radiated casework SWL)	dB(A) 69
ErP identification code	NRVU / UVU

Eurovent energy classification



Calculations conform to the Regulation for unidirectional ventilation unit (UVU) for delivery after 01.01.2018

Ecodesign 1253/2014 2018 UVU after 01.01.2018

Intermediate calculations

SFP int_limit (W/(m³/s))	230.0
SFP int (W/(m³/s))	137.9
n fan_limit (%)	57.7

Supply air unit data

Airflow (m³/s)	9.72
Static pressure (Pa)	833
p fan (kW)	12.49
n fan (%)	64.8
Fine Filter	Yes
dp Fine filter (Pa)	89

Check

Fan is selected with VSD	Passed
n fan_limit	Passed
SFP int	Passed
Filters equipped with pressure gauge	Passed
Total check	Passed

ACCESS DATA

Handle type	L-Handle	Pressure guard at positive pressure doors	Included
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SUPPLY DATA

Glasswool 23 kg/m ³ Type	39HQ 15.12	Air volume	m ³ /s	9.72
Casing construction	GP080 60 mm	Internal sheet		Galvanised 0.80mm
Design outdoor temperature	°C 9.0	External sheet		PUR-PA painted galvanized steel 0.80mm
Design outdoor temperature (summer)	°C 37.5	Insulation		Glasswool 23 kg/m ³
Design outdoor dew point (summer)	°C 16.8	Profile		Steel
Unit velocity	m/s 2.19	SFPv		
SFPe	kJ/m ³ 1.28		kJ/m ³	1.21

Mechanical performance according EN1886	Model box	D1	L1 (-400Pa)	L1 (+400Pa)	L1 (+700Pa)	F9	T2	TB2
	Real Unit		L2 (-400Pa)	L2 (+400Pa)	L2 (+700Pa)			

(Sound data supply SWL)	Hz	125	250	500	1k	2k	4k	8k	dB(A)
	dB	59	66	65	64	63	63	48	69
	dB	64	68	67	66	64	63	48	71
	dB	66	71	79	87	84	88	77	92

In direction of airflow, the unit comprises:

DELIVERY SECTION(S)

Section	Width (mm)	Height (mm)	Length (mm)	Baseframe (mm)	Weight (kg)	Weight (Lifting Beam) (kg)
1	2498	2018	3458	62	1482	32
2	2498	2018	98	62	54	
3	2498	2018	1058	62	558	

EXHAUST COMPONENTS

SUPPLY COMPONENTS

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SINGLE MIXING BOX

Opening Position		Top	Provided with:	
Number of Recirc openings		1	Opening product	None
Recirc opening, w x h	mm	2400 x 640	Damper	External, Opposed blades, Aluminium
Pressure drop	Pa	39	Number of Dampers	1
Actuator type		External	Damper Code	DMP2298x0538-200-162-3-D1Y2-0
Actuator Side		Left	Number of Drive shafts (Total) x Torque for one shaft	Nm 1 x 7
Access side		None	Provided with:	
Opening Position		Full face	Opening product	None
Number of openings		1	Damper	External, Opposed blades, Aluminium
Fresh air opening, w x h	mm	2400 x 1920	Number of Dampers	1
Pressure drop	Pa	4	Damper Code	DMP2298x1818-200-162-12-D2Y2-0
Actuator type		External	Number of Drive shafts (Total) x Torque for one shaft	Nm 2 x 22
Actuator Side		Left	Mixing ratio, winter (recirculation air/supply air) in %	0
Access side		None		

EXTRAS

1 x Coupling rod for dampers

COMBINED FILTER

Primary filter type		Panel (Synthetic)	Secondary filter type		Bag (Synthetic)
Test method		EN 779 / ISO 16890	Test method		EN 779 / ISO 16890
EN 779 Class		G4	EN 779 Class		F7
Eurovent Efficiency Class		NA	Eurovent Efficiency Class		E
ISO 16890 Class		ISO Coarse 60	ISO 16890 Class		ISO ePM1 50
Design pressure drop		Mean pd	Design pressure drop		Mean pd
Initial pressure drop	Pa	74	Initial pressure drop	Pa	96
Mean pressure drop	Pa	99	Mean pressure drop	Pa	146
Final pressure drop	Pa	124	Final pressure drop	Pa	196
Filter casing material		Galvanised	Filter casing material		Galvanised
Filter frame material		Galvanised	Withdrawal method		Side
Filter length	mm	48	Filter length	mm	500

Filters

592x592	Qty	9	592x592	Qty	9
437x592	Qty	3	437x592	Qty	3

ACCESS

Access type	Door	Access side	Right
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EXTRAS

2 x Pressure gauge wall mounted, Magnehelic 2000

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CHILLED WATER COIL			Number of coils		1
Coil Code	P40-16AR-5R-45T-2103A-2.0PA-29NC-Cu	0.41/Al 0.13-4"			
Air volume	m ³ /s	9.72	Fluid	100%	Water
Duty	kW	219.71	Fluid flow rate	l/s	10.46
Air on db	°C	27.0	Fluid on	°C	7.0
Air on wb/RH	°C/%	19.0/47	Fluid off	°C	12.0
Air off db	°C	13.0	Fluid content	l	114.02
Air off wb/RH	°C/%	12.4/94	Fluid pressure drop	kPa	45
Sensible duty	kW	163.33			
Air pressure drop coil (Dry)	Pa	106	Air pressure drop elim.	Pa	16
Tubes/fins/connections		Cu / Al / Fe	Connection type		Threaded (Right)
Coil frame		Galvanised	Connection size		4"
Tube thickness	mm	0.41	Fin spacing	mm	2.0
Tube Diameter	mm	14.1872	Fin thickness	mm	0.13
Face velocity	m/s	2.5			
Eliminator		Plastic – side withdrawal	Eliminator frame		Galvanised
Drainpan type		Recessed (sloped)	Drainpan material		Stainless steel 304
Drain pipes on drainpan		1	Intermediate drainpan		No
Condensed Water	l/min	1.2	Syphon Type		Negative
Coil Weight	kg	313.28	Xin/Yin/Xout/Yout	mm/mm/ mm/mm	244/110/106/106

EXTRAS
1 x Syphone

HOT WATER COIL			Number of coils		1
Coil Code	P40-16AR-2R-45T-2103A-2.0PA-24NC-Cu	0.41/Al 0.13-4"			
Air volume	m ³ /s	9.72	Fluid	100%	Water
Duty	kW	186.67	Fluid flow rate	l/s	9.02
Air on db	°C	8.0	Fluid on	°C	45.0
Air off db	°C	24.0	Fluid off	°C	40.0
Air pressure drop	Pa	35	Fluid content	l	66.74
			Fluid pressure drop	kPa	17
Tubes/fins/connections		Cu / Al / Fe	Connection type		Threaded (Right)
Coil frame		Galvanised	Connection size		4"
Tube thickness	mm	0.41	Fin spacing	mm	2.0
Tube Diameter	mm	14.1872	Fin thickness	mm	0.13
Face velocity	m/s	2.5	Xin/Yin/Xout/Yout	mm/mm/ mm/mm	250/110/100/100
Coil Weight	kg	174.33			

EXTRAS
1 x Syphone

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STEAM HUMIDIFIER					
Air volume	m ³ /s	9.72	Humidifier supplier		Condair
Moisture addition	kg/h	163	Number of steam lances		4
Air on db	°C	25.0	Steam lance length	mm	1800
Air on moisture content	g/kg	2.8			
Air on rh	%	32			
Air off db	°C	25.7			
Air off moisture content	g/kg	6.6			
Air off rh	%	32			
Steam boiler type 1		EL180	Power each	kW	4 x 33.8
Max steam capacity, each	kg/h	180	Current each	A	4 x 48.7
Number off		1	Voltage	V	3x400V, 50/60Hz
Boiler weight, each	kg	120			
Section length	mm	960	Drainpan material		Stainless steel 304
Drainpan		Included			

Note: Electric boilers will be delivered separately (not mounted on the unit). Boiler weights not included in unit weights.

ACCESS			
Access type	Door	Access side	Right

EXTRAS
1 x Syphone

ANY COMPONENT		
Pressure drop	Pa	0

INLET PLENUM		
Air pressure drop	Pa	0

ACCESS			
Access type	Door	Access side	Right

FAN									
Fan type		K3G500PB3305							
Fan arrangement		Fan Wall - 1x3							
Air volume	m ³ /s	3 x 3.24		Installed motor power	kW	5.70			
External static pressure	Pa	392		Motor		Run			
Internal static pressure	Pa	432		Motor efficiency class		IE4			
Static pressure ISP+ESP	Pa	824		Motor nominal speed	rpm	2250			
System effect	Pa	9		Voltage	V	380-480			
Extra static pressure	Pa	0		Current	A	9.0			
Total static pressure	Pa	833		Abs. motor power incl. F.I.	kW	4.16			
Dynamic pressure	Pa	86		Control Signal (0-10V)	V	7.92			
Total pressure	Pa	918		Fan bulkhead material		Galvanised			
Fan speed	rpm	2041							
Max fan speed	rpm	2250							
Efficiency (total)	%	70							
Fan shaft power	kW	4.16							
(Fan sound data SWL)	Hz	63	125	250	500	1k	2k	4k	8k
Total	Inlet dB	41	64	71	71	76	78	88	73
	Outlet dB	46	66	71	79	87	84	88	77

FAN EXTRAS
Inlet cone measuring points

